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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/627,027	Applicant(s) DEL CALLAR ET AL.
	Examiner KEVIN POE	Art Unit 3693

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 March 2009.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-27 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08e)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. This office action is in response to applicant's communication of March 20, 2009. Claims 1-27 are pending and have been examined. The rejections are stated below.

Response to Amendment

2. Applicant's amendment filed March 20, 2009 has been entered and accepted. Based on Applicant's amendment, the rejection of claims 16-27 under 35 U.S.C. 101 has been withdrawn.

Response to Arguments

3. Applicant's arguments with respect to rejected claims have been considered but are moot in view of the new ground(s) of rejection. Claim 1 is not directed to a statutory process because it does not specify which if any steps is carried out by one or more computer systems. The claim may have additional step(s) which may be executed by the computer system and not the ones recited. Also the phrase "one or more computers" renders the claim indefinite since which steps are processed by which computer or without computer cannot be ascertained including structural links.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to nonstatutory subject matter. Based on Supreme Court precedent, a method/process claim must (1) be tied to another statutory class of invention (such as a particular apparatus) (see at least Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584,588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least Gottschalk v. Benson, 409 U.S. 63, 71 (1972)). A method/process claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. Here claims 1-12 fail to meet the above requirements because the claims fail to tie in another statutory class of invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-3, 16-18, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]** and further in view of **Crane et al. [US Pub No. 2008/0052230 A1]**.

8. Regarding **claims 1, 13, and 16** Randell discloses a computer implemented method, system, and program for matching a remittance to a transaction (Abstract, 0017, 0021). Randell does not explicitly disclose accessing remittance lines, transaction information, and a matching rule that assigns a weight to a plurality of parameters considered in said matching. However Lam teaches a request from an entity associated with a purchaser to make payment to a vendor. The request includes a selection of a remittance address from among the respective records for the entity associated with the purchaser. (0026-0028). At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the disclosure of Randell to include the teachings of Lam to obtain invention as specified in claim 1. The rationale to combine the teachings would be an improved system to facilitate transactions between buyers and sellers. Randell discloses for each parameter of the plurality of parameters, determining a score for a match between the remittance and the transaction for the parameter, wherein the score corresponds to a probability of an accurate match between the remittance and the transaction

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for the parameter (level of match, 0073-0074). Lam discloses determining, using the matching rule, a weight assigned to each of the parameters of the plurality of parameters (0098). Randell discloses computing a weighted matching score corresponding to a probability of an accurate match between said remittance and said transaction and generating a match recommendation based on said weighted matching score (level of match, 0073-0074). Lam discloses wherein the weighted matching score is computed based upon, for each parameter of the plurality of parameters, the assigned weight and the score for the parameter (level of match 0058).

Randell does not disclose wherein the matching rule organizes the parameters into a tree structure according to significance of each of the parameters. However Crane teaches billing system suitably processes the remittances through payment hierarchy system (tree structure) which applies a payment hierarchy to the remitted funds to determine the ordering for applying payments to the outstanding amounts owed to the financial events (0046). At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Randell to include the teachings of Crane to obtain invention specified. The rationale to combine the teachings would be for a more efficient billing and remittance system.

9. Regarding **claims 2 and 17**, Randell discloses determining that said weighted matching score is below a minimum scoring threshold; and comparing

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said remittance against a plurality of electronic invoices (0015).

10. As per **claims 3 and 18**, Randell teaches wherein said comparing comprises associating a sum of said plurality of electronic invoices closely to an amount corresponding to said remittance (0015).

11. As per **claim 27**, Randell discloses a computer usable medium wherein said method further comprises handling said recommendations (Page 11 claim 22).

12. **Claims 4 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]** and **Crane et al. [US Pub No. 2008/0052230 A1]** and further in view of **Koller et al. [US Pub No. 2002/0103793 A1]**.

13. Regarding **claims 4 and 19**, Randell does not disclose wherein said associating is performed by a process comprising a Knapsack heuristic. However Koller et al. teaches the first approach is based on an analogy between this problem and the weighted knapsack heuristic: We have a set of items, each with a value and a volume, and a knapsack with a fixed volume. Our goal is to select the largest value set of items that fits in the knapsack. Our goal here is very similar: every edge that we introduce into the model has some value in terms of

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score and some cost in terms of space. A standard heuristic for the knapsack heuristic is to greedily add the item into the knapsack that has, not the maximum value, but the largest value to volume ratio [0353]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Koller et al. to obtain invention as specified. The motivation to combine the teachings is choosing possible essentials that can fit into a weight.

14. **Claims 5 and 20** rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]**, **Crane et al. [US Pub No. 2008/0052230 A1]** and further in view of **Sanders et al. [US Pub No. 2003/0158111 A1]**.

15. Regarding **claims 5 and 20**, Rahn does not explicitly disclose wherein said remittance lines comprise a lockbox file. However Sanders teaches wherein said remittance lines comprise a lockbox file (0310). At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Sanders to obtain invention as specified. The rationale to combine the teachings would be an improved method for electronic funds reconciliation.

16. **Claims 6, 9, 15, 21, and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of

Lam et al. [US Pub No. 2003/0020858 A1], Crane et al. [US Pub No. 2008/0052230 A1] and further in view of Anglum [US Pub No. 2003/0065595 A1], Templeton et al. [US Patent No. 5,679,940] and Harper [US Pub No. 2003/0212654 A1].

17. Regarding **claims 6, 15, and 21**, Randell does not disclose calculating a weighted customer score; calculating a weighted transaction score; and determining a total weighted matching score based on said weighed customer score and said weighted transaction score. However Anglum teaches in addition, the present invention might look at the confidence quality of each name in the list of potential matches. For instance, the name on the credit card might be "Richard M. Nixon." Two individuals with similar names might reside within the trade zone of the store in which the purchase is made, specifically an individual known only as "Dick Nixon" and another individual who goes by the full name "Richard M. Nixon." In this circumstance, the confidence of the second name on the list would be higher than the first. As a result, the second name would score higher on the match quality test (0041). At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Anglum to obtain invention as specified. The motivation would be to understand the desires and trends of its customers. Randell does not disclose calculating a weighted transaction score. However Templeton et al. teaches the host computer calculates a transaction score by accumulating the scoring totals associated with each date element (Col. 28, lines 22-24). At the

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time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Templeton et al. to obtain invention as specified. The motivation to combine the teachings would be to for risk assessment in a transaction.

Randell does not disclose determining a total weighted matching score based on said weighted customer score and said weighted transaction score. However Harper et al. discloses deterministic data correlation determines whether an exact match has occurred and heuristic data correlation generates a set of records that possibly match (candidate records)from the Customer Index Database 14, and then determines a match score for the candidate records. In heuristic correlation, the match scores for the candidate records are compared within the process flow to determine the best match of the candidate set (0071). At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Randell to include the teachings of Harper et al. to obtain invention as specified. The motivation to combine the teachings would be to collect and store customer information.

18. In regards to **claims 9 and 24**, Randell does not disclose calculating a weighted transaction number score; calculating a weighted transaction amount score; and determining said weighted transaction score based on said weighted transaction number score and said weighted transaction amount score. However Templeton et al. teaches the host computer calculates a transaction score by accumulating the scoring totals associated with each date element. The

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authorization host computer then determines whether the transaction score is equal to or greater than a predetermined level that is determined by the merchant's scoring model. (Column 28 lines 22-27). At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Templeton et al. to obtain invention as specified. The motivation to combine the teachings would be to for risk assessment in a transaction.

19. **Claims 7-8 and 22-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]**, **Crane et al. [US Pub No. 2008/0052230 A1]**, and further in view of **Kilpatrick et al. [US Patent No. 6,742,124 B1]**.

20. Regarding **claims 7 and 22**, Randell does not explicitly disclose determining a total match score comprises scoring strings and numbers. However Kilpatrick et al. teaches considering an example comparison of the strings "zabc" and "abcd." In this example, the hamming distance calculation would yield a value of four because the two strings differ at each of the four character positions [see column 9, lines 31-35]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Kilpatrick to obtain invention as specified in claim 7. The motivation to combine the teachings is Levenshtein

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distances provide a smoother, more graduated distance metric [Column 9 line 30-31].

21. Regarding **claim 8 and 23**, Randell does not disclose wherein said scoring strings and numbers is performed by a process comprising a Levenshtein and Longest common substring fuzzy scoring heuristic. However Kilpatrick et al. teaches the levenshtein distance calculation counts the differences between two strings, where differences are counted not only when strings have different characters, but also when one string has a character whereas the other string does not. In this manner, the levenshtein distance is defined for strings of arbitrary length [see column 9, lines 44-50]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Kilpatrick to obtain invention as specified in claim 8. The rationale to combine the teachings is Levenshtein distances provide a smoother, more graduated distance metric.

22. **Claims 10 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]**, **Crane et al. [US Pub No. 2008/0052230 A1]**, **Anglum [US Pub No. 2003/0065595 A1]**, **Templeton et al. [US Patent No. 5,679,940]**, **Harper [US Pub No. 2003/0212654 A1]**, and further in view of **Hey et al. [US Pub No. 2004/0208907 A1]**, **Shurling et al. [US Patent No. 6,424,951 B1]**, and **Falcone et al. [US Pub No. 2002/0194096 A1]**.

23. As per **claims 10 and 25**, Randell does not disclose calculating a weighted customer name score. However Anglum teaches in addition, the present invention might look at the confidence quality of each name in the list of potential matches 38. For instance, the name on the credit card might be "Richard M. Nixon." Two individuals with similar names might reside within the trade zone of the store in which the purchase is made, specifically an individual known only as "Dick Nixon" and another individual who goes by the full name "Richard M. Nixon." In this circumstance, the confidence of the second name on the list would be higher than the first. As a result, the second name would score higher on the match quality test [0041]. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Anglum to obtain invention as specified. The motivation would be to understand the desires and trends of its customers.

Calculating a weighted customer identity score is not explicitly disclosed. However Hey et al. teaches means for calculating identity scores (0151). At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Hey et al. to obtain invention specified. The motivation would be obtaining identity.

Calculating a weighted bank score is not explicitly disclosed. However Shurling et al. teaches the Relationship scoring and Incentive Reward awarding process advantageously implements a technique for scoring Relationships that a customer has with a Bank (Column 17, line 39-41). At the time of the invention it

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would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Shurling et al. to obtain invention specified. The motivation would be for an implementation of a customer incentive program.

Determining said weighted customer score based on said weighted customer name score, said weighted customer identity score, and said weighted bank score is not explicitly disclosed by Randell. However Falcone et al. teaches calculating a customer score using at least one of said customer information. At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Falcone et al. to obtain invention specified. The motivation to combine the teaching would be for optimizing profitability and revenue recovery for businesses.

24. **Claims 11 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]**, **Crane et al. [US Pub No. 2008/0052230 A1]**, **Anglum [US Pub No. 2003/0065595 A1]**, **Templeton et al. [US Patent No. 5,679,940]**, **Harper [US Pub No. 2003/0212654 A1]**, **Hey et al. [US Pub No. 2004/0208907 A1]**, **Shurling et al. [US Patent No. 6,424,951 B1]**, **Falcone et al. [US Pub No. 2002/0194096 A1]**, and further in view of **Cuthbertson et al. [US Patent No. 5,724,597 A]**.

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25. As per **claims 11 and 26**, Randell does not disclose calculating a weighted customer string score; calculating a weighted customer acronym score; and determining said weighted customer name score based on said weighted customer string score and said weighted customer acronym score. However Cuthbertson et al. teaches a method and system for matching textual strings representing customer names/addresses is disclosed. The textual strings are first transformed by a plurality of predefined filters. The transformed textual strings are then compared utilizing a plurality of predefined comparators to determine if the two transformed textual strings match. A score is determined based on the comparison of the two transformed textual strings utilizing a scoring procedure. Based on the score and a matching procedure, it is determined whether or not the textual strings match (Abstract).

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify the disclosure of Randell to include the teachings of Cuthbertson et al. to obtain invention as specified. The motivation to combine the teachings is determining if two textual strings match.

26. **Claims 12 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Randell et al. [US Pub. No. 2004/0064375 A1]** in view of **Lam et al. [US Pub No. 2003/0020858 A1]**, **Crane et al. [US Pub No. 2008/0052230 A1]** and further in view of **Rahn et al. [US Pub No. 2004/0054685 A1]**.

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27 In regards to **claim 12**, Randell does not explicitly disclose sending said match recommendation to a receipt application program interface; assigning an informative header to a remittance for use by a receipt application; where said match recommendation comprises an unmatched remittance, sending said match recommendation to an unmatched remittance notification initiator; and initiating a workflow notification corresponding to said unmatched remittance. However Rahn discloses when a deposit is found to match an RA batch or sub-batch based on an identifying criteria, for example, a deposit ID or a money amount, the RA line items in the RA batch or sub-batch may be considered to be matched to the deposit, and therefore fully paid and the RA batch or sub-batch is advanced to an automatic RA-to-Claim matching process. Rahn discloses each RA data type including RA Batches, RA sub-batches, and RA line item has a unique list of possible states. For example, an RA sub-batch may have a "Matched-to-Deposit" state, an "Unequal-Dollar- Match" state, an "Ambiguous" state, or an "Unmatched" state. If it is determined that the sub-batches associated with the selected batch are in the unmatched state, it is determined whether the RA money totals associated with the batches (viz., an RA batch money total record) have an assigned state designating that the RA batch is unmatched (viz., an unmatched state) to be considered for the automatic deposit-to-RA matching process, at a decision block 310. Rahn discloses upon determining that the RA sub- batches associated with the selected unmatched RA batches (i) have deposit ID identifiers associated with their RA sub-batches, (ii) are in an unmatched state, and (iii) that the RA batch money total records are

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in an unmatched state, the RA sub-batch may be selected at a block 312. Each RA sub-batch may include a processor ID corresponding to the processor responsible for providing information to the remitter and the remittance advice provider (Rahn 0152-0156). At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the disclosure of Randell to include the teachings of Rahn to obtain invention as specified in claim 12. The rationale to combine the teachings would be an improved method and system for automatically reconciling transactions.

28. Regarding **claim 14**, Randell does not explicitly disclose a receipt application program interface operating with said post match handler for providing said match recommendation to a receipt application; and a notification initiator operating with said post match handler for initiating a notification wherein said notification comprises a report that a match failed between said remittance and said transaction. However Rahn discloses the data compare manager automatically compare deposit may automatically compare deposit information data extracted from EDI files to RA data extracted from RAs in an attempt to match the third party payor deposits to a particular RA batch or sub-batch. The process of automatic matching of deposits to RAs, herein referred to as an automatic Deposit-to-RA matching process, may continue until a number of possible combinations of deposit to RA batches/sub-batches matches have been attempted using a variety of identifying criteria. When a deposit is found to match an RA batch or sub-batch based on an identifying criteria, for example, a deposit

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ID or a money amount, the RA line items in the RA batch or sub-batch may be considered to be matched to the deposit, and therefore fully paid and the RA batch or sub-batch is advanced to an automatic RA-to-Claim matching process. Rahn discloses an ambiguous state may indicate that the data compare manager was unable to match the remittance advice sub-batch to a deposit (Rahn 0152-0154).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN POE whose telephone number is (571)272-9789. The examiner can normally be reached on Monday through Friday 9:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAMES KRAMER can be reached on 571-272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ktp
/JAGDISH N PATEL/
Primary Examiner, Art Unit 3693

